

TABLE 2.17  
EAST BELTWAY PRELIMINARY COST ESTIMATES  
1996 DOLLARS

ITEM	CLOSE			MID			FAR		
	QUANTITY (ENGLISH)	UNIT PRICE (ENGLISH)	AMOUNT *	QUANTITY (ENGLISH)	UNIT PRICE (ENGLISH)	AMOUNT *	QUANTITY (ENGLISH)	UNIT PRICE (ENGLISH)	AMOUNT *
DIAMOND INTERCHANGE	5 ea	\$3,254,000	\$16,270,000	5 ea	\$3,254,000	\$16,270,000	5 ea	\$3,254,000	\$16,270,000
structure	1 230 sq m (13,200 sq ft)	\$970 (\$90)	\$1,188,000	1 230 sq m (13,200 sq ft)	\$970 (\$90)	\$1,188,000	1 230 sq m (13,200 sq ft)	\$970 (\$90)	\$1,188,000
embankment	474 000 cu m (620,000 cu yd)	\$2.60 (\$2)	\$1,240,000	474 000 cu m (620,000 cu yd)	\$2.60 (\$2)	\$1,240,000	474 000 cu m (620,000 cu yd)	\$2.60 (\$2)	\$1,240,000
ramps	19 700 sq m (23,600 sq yd)	\$42 (\$35)	<del>\$826,000</del>	19 700 sq m (23,600 sq yd)	\$42 (\$35)	<del>\$826,000</del>	19 700 sq m (23,600 sq yd)	\$42 (\$35)	<del>\$826,000</del>
total each			\$3,254,000			\$3,254,000			\$3,254,000
DIRECTIONAL INTERCHANGE									
I-80/East Beltway									
structure (8)	8 439 sq m (90,840 sq ft)	\$970 (\$90)	\$8,175,600	8 439 sq m (90,840 sq ft)	\$970 (\$90)	\$8,175,600	8 439 sq m (90,840 sq ft)	\$970 (\$90)	\$8,175,600
embankment	1 896 000 cu m (2,480,000 cu yd)	\$2.60 (\$2)	\$4,960,000	1 896 000 cu m (2,480,000 cu yd)	\$2.60 (\$2)	\$4,960,000	1 896 000 cu m (2,480,000 cu yd)	\$2.60 (\$2)	\$4,960,000
ramps	123 250 sq m (147,400 sq yd)	\$42 (\$35)	<del>\$5,159,000</del>	123 250 sq m (147,400 sq yd)	\$42 (\$35)	<del>\$5,159,000</del>	123 250 sq m (147,400 sq yd)	\$42 (\$35)	<del>\$5,159,000</del>
total each			\$18,294,600			\$18,294,600			\$18,294,600
East Beltway/N-2/South Beltway									
structure	5 Structures			6 Structures			3 Structures		
embankment	5 254 sq m (56,550 sq ft)	\$970 (\$90)	\$5,089,500	9 304 sq m (100,150 sq ft)	\$970 (\$90)	\$9,013,500	3 382 sq m (36,400 sq ft)	\$970 (\$90)	\$3,276,000
ramps	969 460 cu m (1,268,000 cu yd)	\$2.60 (\$2)	\$2,536,000	1 422 000 cu m (1,860,000 cu yd)	\$2.60 (\$2)	\$3,720,000	597 900 cu m (782,000 cu yd)	\$2.60 (\$2)	\$1,564,000
total each	124 200 sq m (149,100 sq yd)	\$42 (\$35)	<del>\$5,218,500</del>	111 960 sq m (133,900 sq yd)	\$42 (\$35)	<del>\$4,686,500</del>	111 120 sq m (132,900 sq yd)	\$42 (\$35)	<del>\$4,651,500</del>
			\$12,844,000			\$17,420,000			\$9,491,500
ROADWAY CROSSING	8 ea	\$1,170,000	\$9,360,000	7 ea	\$1,170,000	\$8,190,000	7 ea	\$1,170,000	\$8,190,000
structure	873 sq m (9,400 sq ft)	\$970 (\$90)	<del>\$846,000</del>	873 sq m (9,400 sq ft)	\$970 (\$90)	<del>\$846,000</del>	873 sq m (9,400 sq ft)	\$970 (\$90)	<del>\$846,000</del>
embankment	124 000 cu m (162,000 cu yd)	\$2.60 (\$2)	<del>\$324,000</del>	124 000 cu m (162,000 cu yd)	\$2.60 (\$2)	<del>\$324,000</del>	124 000 cu m (162,000 cu yd)	\$2.60 (\$2)	<del>\$324,000</del>
total each			\$1,170,000			\$1,170,000			\$1,170,000
RAILROAD CROSSING	1 ea	\$1,934,000	\$1,934,000	0 ea	\$1,934,000	\$0	0 ea	\$1,934,000	\$0
structure	1 170 sq m (12,600 sq ft)	\$970 (\$90)	\$1,134,000	1 170 sq m (12,600 sq ft)	\$970 (\$90)	\$1,134,000	1 170 sq m (12,600 sq ft)	\$970 (\$90)	\$1,134,000
embankment	300 000 cu m (400,000 cu yd)	\$2.60 (\$2)	<del>\$800,000</del>	300 000 cu m (400,000 cu yd)	\$2.60 (\$2)	<del>\$800,000</del>	300 000 cu m (400,000 cu yd)	\$2.60 (\$2)	<del>\$800,000</del>
total each			\$1,934,000			\$1,934,000			\$1,934,000
BIKE TRAIL CROSSING	2 ea	\$580,000	\$1,160,000	1 ea	\$580,000	\$580,000	1 ea	\$580,000	\$580,000
structure	370 sq m (4,000 sq ft)	\$970 (\$90)	<del>\$360,000</del>	370 sq m (4,000 sq ft)	\$970 (\$90)	<del>\$360,000</del>	370 sq m (4,000 sq ft)	\$970 (\$90)	<del>\$360,000</del>
embankment	84 100 cu m (110,000 cu yd)	\$2.60 (\$2)	<del>\$220,000</del>	84 100 cu m (110,000 cu yd)	\$2.60 (\$2)	<del>\$220,000</del>	84 100 cu m (110,000 cu yd)	\$2.60 (\$2)	<del>\$220,000</del>
total each			\$580,000			\$580,000			\$580,000
MINOR STREAM CROSSING	2 ea	\$756,000	\$1,512,000	4 ea	\$756,000	\$3,024,000	3 ea	\$756,000	\$2,268,000
structure	780 sq m (8,400 sq ft)	\$970 (\$90)	\$756,000	780 sq m (8,400 sq ft)	\$970 (\$90)	\$756,000	780 sq m (8,400 sq ft)	\$970 (\$90)	\$756,000
embankment	0 cu m (0 cu yd)	\$2.60 (\$2)	<del>\$0</del>	0 cu m (0 cu yd)	\$2.60 (\$2)	<del>\$0</del>	0 cu m (0 cu yd)	\$2.60 (\$2)	<del>\$0</del>
total each			\$756,000			\$756,000			\$756,000
MAJOR STREAM/RR CROSSING									
#1	1 ea	\$3,402,000	\$3,402,000	0 ea	\$0	\$0	0 ea	\$0	\$0
structure	3 512 sq m (37,800 sq ft)	\$970 (\$90)	\$3,402,000	0 sq m (0 sq ft)	\$970 (\$90)	\$0	0 sq m (0 sq ft)	\$970 (\$90)	\$0
#2-Stevens Creek	1 ea	\$8,316,000	\$8,316,000	1 ea	\$12,096,000	\$12,096,000	0 ea	\$0	\$0
structure	8 584 sq m (92,400 sq ft)	\$970 (\$90)	<del>\$8,316,000</del>	12 486 sq m (134,400 sq ft)	\$970 (\$90)	<del>\$12,096,000</del>	0 sq m (0 sq ft)	\$970 (\$90)	<del>\$0</del>
INTERSECTIONS, AT GRADE	1 ea	\$500,000	\$500,000	1 ea	\$500,000	\$500,000	1 ea	\$500,000	\$500,000
PAVEMENT	263 210 sq m (314,800 sq yd)	\$42 (\$35)	\$11,018,000	267 810 sq m (320,300 sq yd)	\$42 (\$35)	\$11,210,500	269 320 sq m (322,100 sq yd)	\$42 (\$35)	\$11,273,500
SHOULDERS	120 650 sq m (144,300 sq yd)	\$16 (\$13)	\$1,875,900	122 740 sq m (146,800 sq yd)	\$16 (\$13)	\$1,908,400	123 410 sq m (147,600 sq yd)	\$16 (\$13)	\$1,918,800
CONNECTING LINK PAVEMENT	106 020 sq m (126,800 sq yd)	\$30 (\$25)	\$3,170,000	231 770 sq m (277,200 sq yd)	\$30 (\$25)	\$6,930,000	305 200 sq m (365,000 sq yd)	\$30 (\$25)	\$9,125,000
EXCAVATION	1 174 400 cu m (1,536,000 cu yd)	\$2.60 (\$2)	\$3,072,000	1 601 700 cu m (2,095,000 cu yd)	\$2.60 (\$2)	\$4,190,000	1 539 800 cu m (2,014,000 cu yd)	\$2.60 (\$2)	\$4,028,000
CULVERTS (major)	5 ea	\$250,000	\$1,250,000	1 ea	\$250,000	\$250,000	1 ea	\$250,000	\$250,000
DRAINAGE STRUCTURES	18 km (11.2 mi)	\$83,890 (\$135,000)	\$1,512,000	18 km (11.4 mi)	\$83,890 (\$135,000)	\$1,539,000	18 km (11.4 mi)	\$83,890 (\$135,000)	\$1,539,000
SUBTOTAL			\$95,491,000			\$102,403,000			\$83,728,000
CONTINGENCIES	20%		<del>\$19,098,000</del>	20%		<del>\$20,481,000</del>	20%		<del>\$16,746,000</del>
TOTAL CONSTRUCTION COST			\$114,589,000			\$122,884,000			\$100,474,000
ENGINEERING DESIGN		6%	\$6,875,000		6%	\$7,373,000		6%	\$6,028,000
CONSTRUCTION ADMINISTRATION		8%	\$9,167,000		8%	\$9,831,000		8%	\$8,038,000
HOUSES/COMMERCIAL	6 ea	\$500,000	\$3,000,000	5 ea	\$500,000	\$2,500,000	10 ea	\$500,000	\$5,000,000
RIGHT-OF-WAY	449 ha (1,110 ac)	\$29,900 (\$12,000)	\$13,320,000	388 ha (960 ac)	\$25,000 (\$10,000)	\$9,600,000	449 ha (1,110 ac)	\$20,000 (\$8000)	\$8,880,000
TOTAL			\$146,951,000			\$152,188,000			\$128,420,000

\* extended costs are based on English quantity and unit prices